

# Simple Ground Equipment

## 8 Services

Milestones (2)

## Updates and milestones

### Version 62.5 2023-04-25 minor update

1. Deicing truck updated with dynamic fluid effects in X-Plane 12
2. Deicing truck now available below 10°C OAT (instead of below 5°C OAT previously)

### Version 62.6 2023-05-07

1. **Adjusting manually the front stair height is now possible** in the GUI for all airliners, useful for some sloped apron (stairs mark III).
2. **For some aircraft, adjusting manually the front stair longitudinal and lateral location is now possible**, when the dataref sim/aircraft/view/acf\_door\_x is not defined by the aircraft author. That allows to use the front stairs even when the door is not defined, as it happens sometimes on freeware models (stairs mark III).
3. Passengers path reworked to take live into account the front stair adjustments.
4. Bigger proportion of military passengers when required.
5. **Stairs mark I can now be rotated and moved** around.
6. Output for the X-Plane log file cleaned for freeware aircraft without door definition (less verbose)
7. **C-17 Globemaster** now added
8. The B707 airliner now uses the two floors airstairs like other airliners
9. The Sikorsky **S-61 Sea King** is added
10. The Sikorsky **OH-58D** is added
11. **Rotate MD-88** increased support (can open the doors with the passengers)

### Version 62.7 2023-05-26 minor update

1. Added water effects to the fire department truck (active with X-Plane engine number 1 fire)

### Version 62.8 2023-06-09

1. New : **when X-Plane is paused, so is the automatic pushback**
2. Tailored again the IniSimulations A300 (R)-F and IniSimulations BelugaST following their release in Open Beta for X-Plane 12. Both were already supported but it needed work again.
3. Moved the ground people away from the pusback truck (was in collision after the automatic pushback)

### Version 62.9 2023-07-16

1. **New feature : progressive conclusion of the passengers boarding and de-boarding operations.**
2. Update : as I gained in experience in X-Plane 12 effects, heat blur effects added to the push-back vehicle, the TLD GPU, the generic Air Start Unit (+ASU air hose no more reflective).
3. Update : the **deicing fluid is updated to green and yellow** colors (more realistic than red).



4. **New feature : added a new wing cone option** for airliners, with an animated safety fabric strip reacting to the wind. (Only available on flat aprons).



5. **New feature : added the right wing cone(s)**



6. Update : redone from the ground up the [fuel truck arrival animation](#) for more smoothness.
7. Bug fix : corrected a bug in departing animation of the fuel truck (bug fix along with update)
8. **New feature :** added a slider to manually [adjust the distance between the conveyor belt loader and the fuselage](#)
9. **New feature :** the [fire engine is now able to aim also at the second engine](#) if it's on fire.
10. Update : reworked the arresting net barrier with some dynamic effect (quite unnoticeable in flight)
11. Bug fix : force detecting Embraer E-Jets series as passengers planes
12. Bug fix : prevents the rear belt loader to show up with some regional aircraft (Q400, CRJ, Metroliner)
13. Bug fix : commented out my own reference to the X-Trident Chinook directory in CONFIG\_vehicles.lua, each user may set that to their own location if they have the CH-47

#### [Version 62.9b](#) 2023-07-17

1. **New feature :** [the possibility to board and deboard the passengers without airport stairs](#). Selectively enabled in the Dash-8 Q400, the Challenger 300 and 650, the freeware C-17 Globemaster, the CH-47 Chinook helicopter, the CRJ-700, -900 and -1000. This allows boarding via the aircraft embedded stairs. [Manual adjustment of the boarding target point is required using the new "No stairs" option](#).



#### [Version 63](#) 2023-07-20

1. New small catering truck (with signal lights) - some regional turboprops airliners were too small for the regular catering truck
2. Updated the small Swissport fuel truck with signal lights
3. Updated the generic Air Start Units (ASU) and the ASU for ToLiSs with softer blinking lights
4. Customization of the interface for the Dash-8 (Q400) : added buttons to open the doors
5. Customization for the Dash-8 (Q400) : activated for the Q400 the small variants of the catering and People with Reduced Mobility (PRM) vehicles.
6. X-Crafts Embraer customization by [@bastienvdc](#), now SGES can act on the Embraer door. Thanks !

7. Modified the initialization of the passengers to reduce the number of occurrences of overlapping passengers (more time let between two passengers) (for the Q400 at the time being)

#### Version 64 2023-08-07

1. **New controls for the carrier and the frigate**, it is now possible to steer them in X-Plane 12

#### Version 65 - 26 August 2023

##### **Tested in X-Plane 12.05 and in X-Plane 11.55**

1. **New : FMOD sounds** for X-Plane 12. Subtle engine sounds, set on the environmental sound channel.
2. **New : Unleash the power !** The new **Bush mode** allows many combinations of ground objects. Get some ground clutter for grass strips and remote places. (The bush modes becomes available when the user aircraft is small).
3. **New : Cockpit entry light !** Soft diffuse lights creates a night ambiance allowing to see in the dark during the initial cockpit access from dusk to dawn (condition: aircraft standing still on the ground).
4. **New : compatibility with the 747-200 E-4B mod** : stairs on the right hand side cargo door (conditions : ICAO code "B742", author "Felis Leopard", military set is selected in SGES menu)
5. **Tweak** : the aiming cue for the automatic push-back now reaches a maximum angle of 110° instead of 90°, allowing more complex push-back scenarios with amplified turns.
6. **Tweak** : allowed the boarding without stairs also for the Rotate MD-88
7. **Tweak** : follow-me object correction, removed the blue tint at night
8. **Tweak** : limited the Jeep Willys MB apparition to military Bush mode. Two new military passenger vehicles are now used instead.
9. **Bug correction** : corrected a FlyWithLua crash associated with Follow-me car procedures when the sounds are deactivated as an option.
10. **Info** : script tested in X-Plane 11.55. It works, but **the new functions are restricted to X-Plane 12.05 and above.**

Play with the Bush mode/Regular mode and Mil/civilian variants to make & mix any ground services combinations you wish.

The bush mode is enabled by default with the Piper Cub, Beaver, the Kodiak, the Grand Caravan, the Pilatus Porter, the DC3/C47, the C172M. Uncheck the box to revert to airport services.

The FMOD engine sounds are kept low : you don't want them to be louder than your actual aircraft engine, and you don't want loud sounds to spoil the Simple Ground Equipment and Services experience by annoying noise.

We make use of some new X-Plane 12.05 objects, [exclusive to this version and superior](#).

#### Version 65.1 - 2023-09-03

1. Offers the possibility to increase the Pushback engine force, useful on slopped apron
2. Support for the Dornier 228, the Dornier 238 and initial support for the A220-100
3. Separated all pushback related function in a different Lua file, to anticipate future changes in those functions

#### Version 65.2 - 2023-09-05

1. Bug fix : an user reported the fuel truck incorrect pitch while while the pushback bar was connected to the front gear before calling for fuel.

#### Version 65.3 - 2023-09-17

1. Updated the Boeing 737-300 Classic definition to allow a rear airstair to show up from now on.
2. Added the Airbus A340-500 support by

#### Version 66 - 2023-09-28 (branded as X-Plane 12.07 and superior)

1. **Adapted the lights to X-Plane 12.07 new lighting** : many 3D object were edited for v66. Retro-compatibility NOT tested for those lights.
2. Bug fix : cleaned some fuel truck informations in the x-plane developer console
3. Created a new, 2 pages, **quick start manual**
4. Slightly updated the main manual

#### Version 66.1 - 2023-09-29

1. Bug fix : removed my own link in the code to my personal installation of the X-Trident CH-47 Chinook
2. Updated the Simple\_Ground\_Equipment\_and\_Services\_CONFIG\_vehicles.lua to add automatic detection of X-Trident army assets if possible (testing 4 locations then die). Still human intervention can be required in case of a non-standard path of installation in X-Plane of the Chinook CH-47D by X-Trident.

#### Version 67 - 5th November 2023

1. New feature : **a new big feature was added** , with new vehicles, new sounds, new interactions.



2. Revamp, Marshaller version 2 : **remade the marshaller**, so that **selecting a stand after browsing among multiple stands** in the vicinity of the aircraft is now possible,. Marshaller version 2 is also more optimized. It's a significant step forward in functionality.
3. Revamp : a long standing issue was discovered : some gates and tie\_down ramp starts were not collected in the SGES cache when their magnetic heading was a negative value. Now we get some **more ramp start from X-Plane for the marshaller**.
4. **Improved the chocks handling** : automatically remove them if the user loads a flying situation, or slew the aircraft into a flying situation, while chocks were set in the previous situation
5. Bugfix : on X-Plane 12 **the marshaller didn't say "Stop" anymore** when reaching the aimed parking position
6. Bugfix : **front passengers incorrectly walking to the bus** during dual deboarding from aft and front exits [fixed]
7. Bugfix : disembarking without stairs settings window caused an X-Plane crash for the C-17 aircraft [fixed]
8. Bugfix : resolved unbalanced animation of the green passenger van, modified for X-Plane 12 the Sentosa Leader periodic distress signal
9. UI tweaks, more tool tips added

#### Version 67.1 - 19th November 2023 - for X-Plane 12.0.8

1. **New feature** : workaround XPD-14774 <https://developer.x-plane.com/x-plane-bug-database/?issue=XPD-14774>. Now you can use the script with X-Plane 12.0.8
2. **New feature** : F-104 Starfighter and Beechcraft Duchess 76 support
3. **Tweak** : Expanded again the marshaller parking position search capabilities
4. **New feature** : display a VS0 / VS1 / Vfe / Vno / Vne briefing in SGES window

#### Version 67.2 - 23th November 2023 - for X-Plane 12.0.8

1. **Bug correction** : restored the pushback (FlyWithLua crashed after the large scale changes made for v67.1). Very sorry about that.
2. **Tweak** : expanded the threat to aircraft module to include heat-seeking sensor for the terminal guidance
3. **Tweak** : expanded one 3D object
4. **Tweak** : renamed a Lua module

#### Version 67.3 - 4th December 2023

1. **Tweak** : changed the threat to aircraft to reduce to 10 nm the airspace defended around the threat. Updated the SAM manual with graphical depiction.
2. **New** : COLIMATA F-104 Starfighter special enhanced support : among other things, supports COLIMATA external power unit and external air unit directly in our menu

3. **New** : included the x-plane rearm command in the menu, to refill weapons of military aircraft on ground with chocks set
4. **New** : it is now possible to set directly in the menu the distance to fire site / EMS / accident site ahead
5. **Tweak** : changed the distances displayed in the menu to nautical miles (shipwreck / EMS site ahead / carrier and frigate ahead location, are all expressed explicitly in nautical miles now)

#### Version 67.4 - 9th December 2023

1. **New feature** : anti-respawn of downed airplane. Below a given altitude floor, aircraft are being disabled.
2. **Small changes** : SR-71 defined, performance optimization
3. **Other changes** : main manual in PDF significantly updated, quick start manual updated slightly

#### Version 67.5 - 17th December 2023

1. **New feature** : air to air refueling (simplified) for planes equipped with a receiver. A specific manual was written.



#### Version 67.6 - 18th December 2023

1. The position of the SGES window is saved between flights and X-Plane sessions
2. Possibility to align the rear belt loader with the rear cargo compartment door. Many payware airliners configured in v67.6 (B737,747,757,767, A319/320/321/333/346, E175/195).
3. Some PDF edited.



## Version 67.8 - 8th January 2024

- solved some objects not spawned when the aircraft is in flight (ships/fire/runway arresting systems)
- chocks OFF by default to avoid sliding aircraft in strong winds, cancelled 67.7 changes
- second upload on 11th January to this server with just a change : the X-Works A330-900neo added on the aircraft config.

## Version 67.9 - 27th January 2024

- Leonardo Aermacchi M-346 ground services configuration added.
- Leonardo Aermacchi M-346 supported for the air to air refueling.
- X-Plane version chasing : X-Plane 12.0.9 has new 3D objects. The legacy tow bar is not found anymore after 12.0.8. The new X-Plane tow bar is now used for the pushback. Yet we do not forget retro compatibility with older versions of X-Plane.

Nothing very spectacular for the version 68, I'm afraid :

## Version 68 - 13th March 2024

- In-flight refueling : the refueling basket is now shown not only with landing lights ON but also with taxi lights ON or tailhook down as a backup trigger, because the aircraft not always has landing/taxi lights
- Developer mode : intended for my own use mainly, allows to **look for aircraft parameters live in-game**, to reduce the iterations of reloading the Lua scripts when equipping a new model. Paves the way for in-game saving, one day, maybe.
- A new **exclusion list** allows the user to completely disable SGES for a given aircraft type (Simple\_Ground\_Equipment\_and\_Services\_EXCLUSIONS\_Aircraft\_list.lua). I disagree with that way of doing (I prefer to fix compatibility rather than disable stuff) but it is nevertheless now offered.
- A new **inclusion list** allows the user to enable in-flight refueling for a given aircraft type (Simple\_Ground\_Equipment\_and\_Services/Simple\_Ground\_Equipment\_and\_Services\_Refuelable\_Aircraft\_list.lua)
- The stairs leading to the cargo hold is now more visible and **labelled "E-4 stairs"** for the once presidential Boeing 747-200.
- A Lübeck conus can now be automatically replaced by a fire extinguisher sometimes

## Version 68.1 - 23th March 2024

28th March, reupload to the Org. Changed archive format for 7zip instead of zip. <https://www.7-zip.org/download.html>

- Increased stability : Prevent a possible FlyWithLua crash when closing the SGES menu after updating to v68.
- Increased stability : Prevent a possible FlyWithLua crash when passengers are requested before the stairs (or "no stairs") option is applied
- Usability : The "No stairs" (board directly) option is now automatically applied, when the bus is called for the planes with fuselages low above the ground.
- Vehicle diversity : When standing at certain Washington city key points, SGES provides a limousine instead of the regular passenger car or bus.

## Version 68.2, 8th of April 2024

### **Lot of work !**

- **The Marshaller can be requested independently of the Follow-me.**
- XP12 : **animated passengers luggage** on the front belt loader. That was required by users from time to time. (Freight configuration not covered).
- Large code changes and code tweaks everywhere.
- Baggage trains textures updated.
- Automatic sequence reviewed.
- Rear loader automatic apparition.
- UI reorganization of Betterpushback and jetway shortcuts.
- Updated links to some default X-Plane 12 vehicles, to chase X-Plane evolution.
- Extensive testing on XP12 before release.
- Reupload at 21:18 UTC, 8th of April, bug fix : vehicles were seen below the ground level

sometimes.

## [Version 68.3, 9th of April 2024](#)

### **Lot of work !**

- XP12 : **animated LD3** in front of the forward cargo hold. Switch between bulk luggage and **containerized freight**.
- XP12 : new baggage handlers (animated people). Removing the Cart will make both human handlers and baggage disappear if you wish.
- Some 3D objects (people, ULD loader) changes.
- MD-11 rear loader added in the aircraft configuration file.
- Vehicles configuration file amended to support the changes in the code.
- Extensive testing on XP12 before release. Where tested under X-Plane 12.0.9 the MD-11, the A319, the A321/A21N, the B738 and the Q400 (for the left hand side cargo hold). I cannot humanly test all situations for all aircraft so if any problem, please report in the comments.
- Reupload at 28:53 UTC, 9th of April, bug fix : fix a baggage handler problem on the A340-600. Amelioration : increased the GUI height to allow more room for the active deicing option when it is apparent.



## [Version 68.4, 10th of April 2024](#)

**New :** Opened a new configuration of the ground services : **the ATR 42 and ATR 72 are now supported.**

New : Allowed the X-Plane 12 luggage train to show during daylight, the new art assets are nice.

New : Added local and zulu time to the GUI, as well as your computer clock.

New : allowed the X-Plane 12 luggage train to show during daylight, the new art assets are nice.

**New : Added LD3-45 containers** for narrowbodies on top of the already existing LD3 containers, now restricted for widebodies.

### **Bugfix : repaired the luggage worldwide**

Tweak : slightly tweaked the Dash-8 luggage train location.

Tweak : prevented a situation where the departing luggage train and the boarding passengers were conflicting (regional aircraft).

Tweak : X-Plane native cargo loaders now always excluded in favor of MisterX ones, their placement was bringing complexity due to a different geometry.

Tweak : prevented some illegitimate objects to show with UseXplaneDefaultObject = true.

Tweak : always favor ToLiss chocks, made the SGES chocks less visible in this case.



#### Version 68.5, 12th of April 2024

New : [Visual\\_docking\\_system\\_manual.pdf](#).

#### Version 68.6, 12th of April 2024

- Enhancement : an user reported to me that the legacy Aerosoft ATR 72 wasn't recognized by SGES. [Done]
- Enhancement : more accurate marshaller (VDGS untouched)

#### Version 68.7, 13th of April 2024

- Enhancement : right hand side cargo clutter in bush mode is now truly freight [user request]
- **Parking stand marshaller code fully revisited, 3D figure changed** (VDGS untouched)

#### Version 68.8, 28th of April 2024

- The visual docking guidance system has now a clock. The user can choose to switch to UTC or local time on the go or permanently in the options lua.
- Marshaller/VDGS : looking for a stand now provides the nearest stand first
- New paint decorations : fuel truck, catering (dependent on some conditions in X-Plane).
- New roofed airstairs (dependent on some conditions).
- Makes available the X-Plane fuel truck pump instead of a cistern truck (dependent on conditions).
- Aircraft configuration : the Airbus A318 and Concorde now have the rear belt conveyor set.
- (All improvements only developed for X-Plane 12).

#### Version 69, 29th of April 2024

- A new fuel truck in the USA, a regional variant with long nose
- All textures are now regrouped in a "textures" folder and not anymore disseminated. **Now, the painters can redistribute their vehicles liveries easily to replace the default ones.**
- **Critical bug fix** : forever **force vehicles to disappear as requested**. Finally ! (Bug report was : "objects remain against the plane").
- **Critical bug fix** : the runway databank compilation for **the arresting system now catches runways names under the FAA jurisdiction** without leading zeros like 4R or 4L. (I just realized that wasn't working as I don't fly often there. Long standing bug !)
- The arresting system now looks for up to 12 runways ends in the vicinity, instead of 8 previously (plus 4).
- Quality : stability checks and tests (in X-Plane 12.0.9).

#### Version 69.1, 2nd of May 2024

- Supports openSAM jetways by adding a button next to the regular X-Plane jetway switch in the SGES graphical interface. Only appears when a suitable SAM jetway is in range and when openSAM is installed.
- openSAM is great : <https://forums.x-plane.org/index.php?/forums/topic/304714-opensam-an-open-source-replacement-for-sam-beta/&>

#### [Version 69.2, 6th of May 2024](#)

- Corrects flywithlua errors in 69.1, reported by users.
- Added a (conditional) "terminal" checkbox to enable the passengers to walk to or from the terminal building, without any airport bus

#### [Version 69.3 15th of May 2024](#)

- The MD-88 Maddog catering truck is now a smaller variant, near the deployable stairs.
- **X-Trident AW109SP support**
- New button to cycle the automatic sequence duration between 9, 12 and 18 minutes. Defaults to 18 minutes as before.

#### [Version 70b, 21th of May 2024](#)

- **New** : The big airliner we don't talk about support
- **New** : Turn around sequence (25 minutes)
- **New** : **User profiles**. User profiles : save your own changes to ground services locations. Totally optional, SGES works without aircraft profiles by default.
- Manual (PDF) updated
- Push-back tuned
- Reporting in X-Plane log file enhanced

#### [Version 70.1, 25th of May 2024](#)

- **New** : third airstairs manually adjustable (available for some airplanes)
- **New** : Switch between PRM truck and Catering truck at 1R door (available for some airplanes)
- Undisclosed various tweaks

#### [Version 70.2, 27th of May 2024](#)

- Fixed an error in detecting ToLiSs aircraft models
- Changed developer mode, now includes saving the third stairway location in user profiles. I believe @mooney man will be happy !
- Added Airbus A350-900 third stairway parameters on top of B764, B772, A346 and A333 in SGES without having to save any user profile.
- Many small code changes everywhere, I hope I didn't broke something.

#### [Version 70.3, 4th of June 2024](#)

- Towbarless pushback option

#### [Version 70.4, 5th of June 2024](#)

- Issue with baggage cart "Too many callbacks" resolved, thanks to @mooney man reports
- Stability release

#### [Version 70.5, 2nd of July 2024 :](#)

Supports JustFlight Pipers 28 in XP11 and XP12 (chocks and tie-downs from our menu), following the JustFlight PA-28-R Arrow III release for X-Plane 12.

#### [Version 70.6, 9th of July 2024 :](#)

Increased support for the Embraer E-Jets, in particular the X-Crafts versions of the E170, E175, E190 and E195. Service location reworked. Second airstairs added.

#### [Version 70.7, 18th of July 2024 :](#)

Developer modes adds two new, independent, optional, service customisations : the fuel truck position and the fuel hydrant dispenser position can be adjusted by the end user.

#### [Version 70.8, 19th of July 2024 :](#)

Significant rework of the fuel hydrant dispenser animation.

Now includes a default fuel hydrant dispenser position for the A320, A350, A330, A340, B737NG,

B747, B757, B767, MD11, BAe-146 and E-Jets series. Significant effort !

### Version 71, 26th of July 2024

1. Stability release : suppressed the animated passengers "too many callbacks" issue ! Fully tested (without sequence, with start sequence and with turn around sequence).



2. Added X-Plane 12.1.1 ULD loader for the cargo hold, changed geometry of ULD animations while retaining backward compatibility with X-Plane 12.0.9. (Was a long and tiring work !)
3. Main cargo deck for freighter configuration updated with new X-Plane 12.1.1 ULD loader, then position of the loader for B748F, B757F, B767F, MD11F, A321P2F adjusted (Was a long work !)
4. Added the fuel hydrant custom location also for the DH8D (Q400) under the wing at bigger airports (While I was at it !)
5. Tested in X-Plane 12.1.1 (I had to !)
6. Many crosschecks and regression checks to ensure the new functions do not alter the existing services (That's the longest part of the job ! There are so many aircraft geometries to check and undocumented functions in the code to tailor the services to various aircraft !)

### Version 71.1, 28th of July 2024 :

1. For aircraft using containerized freight in the belly cargo holds, improved the ULD loader animations (only for X-Plane 12.1 and above).
2. For freighters with a main cargo deck, improved freight operations animations (only for X-Plane 12.1 and above).
3. Fuel hydrant dispenser position added for the Airbus A300-600, A300-600ST.
4. Position of the freight loader for the Airbus A300-600 adjusted.

### Version 71.2, 2nd of August 2024 :

1. Fuel hydrant dispenser position added for the Boeing 777-200 under the port wing.
2. Position of the freight loader ameliorated for the Boeing 777-200, Boeing 747-8F. (For the 747, from an user value)

### Version 71.3, 6th of August 2024 :

- Adjusted the cargo loader on the left hand side for the Boeing 727-200F. (X-Plane 12.1 and above only can receive the advanced ULD loaders)



- Added cargo loader in-game manipulators for users.
- Added Juneau, and Dawson City (Yukon) as airports which have fuel hydrant dispensers, as well as Calgary and Vancouver.
- Added under wing fuel hydrant for the Boeing 707.



- Added Br 763 Provence (aka "Breguet Deux-Pont")
- Added MD-90 geometries
- Corrected the fuel delivery on landing (when delivered by air by helicopter), object pitch was incorrect under certains circumstances



- New "On carrier !" buttons, to jump to the carrier directly.
- Added an Easter egg.
- Just for information : updated my FlyWithLua NG+ for development from v2.8.11 to v2.8.12
- On the off chance that it might be useful someday, I created a new entry in the FlyWithLua menu to open a new SGES window, titled "VR window". It was not tested with a VR headset, therefore will probably not work. I wasn't able to find much on VR and FlyWithLua apart from a Sparker video.

#### [Version 71.4, 7th of August 2024 :](#)

1. VDGS pylons can be adjusted in distance - how would you like it afar from stand ? (in-game slider added)
2. Submarine operations



## **Version 71.45, 3rd of October 2024 :**

### **VARIOUS CHANGES**

- changes to the graphical user interface to allow it above 200 KIAS up to 270 KIAS. (previously the GUI was restricted, and closed above 200KIAS). [update]–IAS24
- The third airstairs are now included in the automatic sequence for removal : they are removed along the other stairs at the end of the sequence, when present at the fuselage. (Note : third airstairs are restricted to a limited set of planes). [update]–IAS24-
- The third airstairs are now also included in the pushback automatic sequence removal (Note : third airstairs are restricted to a limited set of planes). [update]–IAS24

### **VISUAL DOCKING GUIDANCE SYSTEM**

- VDGS moved away a little bit by default for large airliners. (Main & subscript updated) [update]
- VDGS now available in X-Plane 11, not only X-Plane 12. [NEW] –IAS24
- Marshaller system reviewed : SGES code upgraded to better serve also the large airliners, designating arrow more noticeable
- GUI : new options for automatic stand search "FAR" on top of "WIDE" and "NARROW" automatic searches [update] –IAS244



### **PUSHBACK**

- Pushback module updated to include wing walkers. (Note : wing walkers are restricted to a limited set of planes). [NEW]–IAS24



- Pushback truck will drive away a little farther after disconnection to be more visible from the flight deck for certain categories of airplanes. [update]--IAS24

## NAVAL OPS



- Two new submarine models, and code changes to create an helicopter landing pad on them. [NEW]
- the submarine now turns when reaching a coast [update]
- Added compatibility with third party ships with helicopters landing pad : Meko 360 class frigate, Tarawa LHA, Nave Cavour STOL carrier. [NEW]



- Improved landing physics on the X-Plane aircraft carrier, the X-Plane frigate, the Meko 360 class frigate, the Tarawa LHA, the Nave Cavour STOL carrier, when used as SGES static ships. [update]

#### **Version 72, 6th of October 2024 :**

- the X-Plane 12.1.2 bus is used during daylight hours [NEW]
- Added missing 3D objects (ULD, ULD loader part) in SGES package



#### **Version 72.1, October 2024 :**

- A330-900 Neo support. [update]

#### **Version 71.45, 3rd of October 2024 :**

The third airstairs are now included in the automatic sequence for removal : they are removed along the other stairs at the end of the sequence, when present at the fuselage. (Note : third airstairs are restricted to a limited set of planes). [update]

The third airstairs are now also included in the pushback automatic sequence removal [update]

Changes to the graphical user interface to allow it above 200 KIAS up to 270 KIAS. (previously the GUI was restricted, and closed above 200KIAS). [update]

VDGS moved away a little bit by default for large airliners. (Main & subscript updated) [update]

VDGS now available in X-Plane 11, not only X-Plane 12. [NEW]

Marshaller system reviewed : SGES code upgraded to better serve also the large airliners, designating arrow more noticeable

GUI : new options for automatic stand search "FAR" on top of "WIDE" and "NARROW" automatic searches [update]

Pushback module updated to include wing walkers. (Note : wingwalkers are restricted to a limited set of planes). [NEW]

Pushback truck will drive away a little farther after disconnection to be more visible from the flight deck for certain categories of airplanes. [update]

Two new submarine models, and code changes to create an helicopter landing pad on them. [NEW]  
the submarine now turns when reaching a coast [update]

Added compatibility with third party ships with helicopters landing pad : Meko 360 class frigate, Tarawa LHA, Cavour STOL carrier. [NEW]

Improved landing physics on the SGES static ships. [update]

#### **Version 72.0, 6th of October 2024 :**

The exclusive to X-Plane 12.1.2 bus is in use [NEW]

Added missing 3D objects (ULD, ULD loader part) in SGES package

Expanded documentation updated

#### **Version 72.1, 9th of October 2024 :**

Added compatibility with third party ship HMS Hermes, by Alpeggio and juanik0.

Added moving ships (surface vessel also, not only submarines as before !) - lots of new code lines !

Moving ships compatibility : as the static ships, that is the Meko 360 frigate, Tarawa, Cavour, HMS Hermes (this last one is included in the download, the others, you need to download), and submarines (Virginia class, Akula class, Barbel class)

Added (simplified) landing physics on the moving ships.

UI changes to accommodate developing naval operations : static ships and moving ships clearly labelled.

#### **Version 72.2, 12th of October 2024 :**

Beyond previous compatibility with third party ships by Alpeggio, Helodriver89 and Juanik0, we now distribute them, with permission, to be compliant with intellectual property rights

IPR further checked

SS-581 submarine, Aircraft carrier HMS Hermes, LHA USS Tarawa, Meko 360 frigate added (no need to download them any more)

Corrected two flywithlua crashes introduced in version 72.1 of SGES

#### **Version 72.3, 19th of October 2024 :**

A330-900 Neo support.

#### **Version 72.4, 22th of October 2024 :**

Corrections and bug fixes, the pushback in particular. (All aircraft).

#### **Version 72.5, 4th of November 2024 :**

For X-Plane 11, correction of the "attempt to perform arithmetic on global 'SGES\_XPlane\_user\_interface\_scale' (a nil value)" error

Added 3 car models for specific cases.

Not a Texan bush taxi anymore when calling the passengers car in the bush.

#### **Version 72.7, 27th of November 2024**

- Recognize OpenSAM jetways connected then prevents the front stairs to appear (only OpenSAM, not SAM, not Autogate, nor X-Plane 12 jetways)
- Added a saved option to allow the user to disable forever all automatic appearances of front stair and passenger bus in the automated sequence (manual override always available).
- Repaired ULD animation on the main cargo deck (freighters).
- Added the Gulfstream 650 ER geometry
- Repaired the passengers bus showing instead of smaller vehicles in some situations
- Bug fix : compared to version 72.6, repaired SGES for users not using OpenSam. The case was anticipated, but not coded correctly.
- Bug fix : repaired a bug crashing flywithlua with wing walkers in the USA.

### Version 72.8, 10th of December 2024

- CH-53E
- Changed Load/Unload box to a toggle for baggages.
- Adaptation for the freeware E-Jets (checks if ground service dataref exists)
- Checked with ZIBO B738X V4.01.12
- Checked compatibility with ZIBO B738X V4.03.00 : you may disable the built-in ground services to allow SGES services if you wish. Otherwise SGES will remove it own stairs and passengers bus automatically when ZIBO stairs are displayed.

